JUNE 1977

DRIVER

SPECIAL SECTION

NASAP

THE NAVY'S PEOPLE HARBOR

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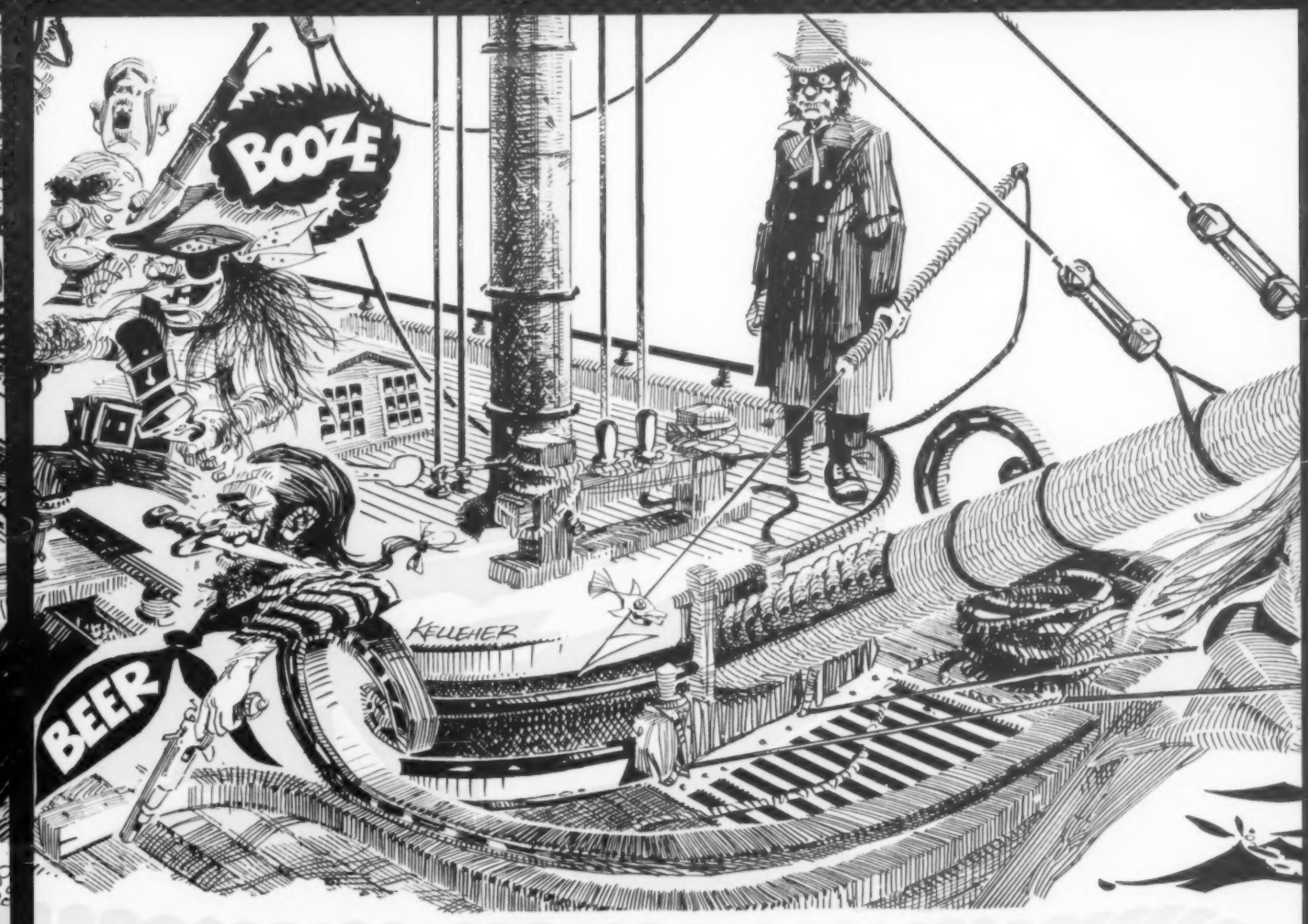

SPECIAL SECTION

"Toast to NASAP"

One beer or a pair of six-packs, a shot or a fifth — any way you like to drink, this story is for you.

The Navy has a good thing going . . . and we think the world should know about it. It has a new program to prevent arrests for drunk driving—or any other alcohol-related offense for that matter—and it's really working.

Navy men and women by the hundreds, from apprentice seamen to admirals, are picking up on a back-to-school deal that promises not only to help improve their lives and careers but also to save the Navy hundreds of millions of dollars annually. It's called NASAP—the Navy Alcohol Safety Action Program.

Before you flip this page and dash to the fridge for another brew, we think you also ought to know that the Navy is primarily interested in helping its own—not punishing them—for drinking too much. It freely admits that 97% of its 525,000 military members imbibe, that 200,000 are problem drinkers, and that 80,000 of this number ALREADY ARE or WILL BECOME alcoholics.

These figures don't include large numbers of Navy dependents, both adults and children, who also drink or have problems with alcohol.

Shocking numbers? Amen! No one denies their authenticity, especially

continued

by FRAN FOWLER

DRIVER

THE TRAFFIC SAFETY MAGAZINE FOR THE MILITARY DRIVER

JUNE 1977

VOLUME 11 NUMBER 1

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DEPARTMENT OF THE AIR FORCE ■ HQ AIR FORCE INSPECTION AND SAFETY CENTER
Norton Air Force Base, California 92409

Lt Gen JOHN P. FLYNN
The Inspector General, USAF

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DR. FRANCIS S. McGLADE, Director of Safety, United States Army
Maj Gen RICHARD E. MERKLING, Director, Aerospace Safety USAF
RADM ROBERT F. DUNN, Commander, Naval Safety Center

Col DAVID E. RALEY, Chief, Safety Education Division
VIRGINIA HENDRIX, Editor

SSgt DON HOLT, Technical Editor
FRANCIS R. (FRAN) FOWLER, Feature Editor
DON KELLEHER, Art Director
LORRAINE HAMBLEN, Staff Artist
ALICE MILKEY, Editorial Administration
MSgt MIKE KEEFE, CLIFF MUNKACSY, Staff Photographers

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Certain individuals shown in this magazine are not members of the Air Force and therefore do not conform to Air Force grooming standards.

THE EDITOR SPEAKS

DOUBLE CLUTCH

ROUTINE MAINTENANCE

Regular readers know that DRIVER worries a lot about you who are pumping your own gas these days but forgetting the routine maintenance items that you used to be reminded of by the station attendant.

The Motor and Equipment Manufacturers Assn. (MEMA) says there are 14 items on the list for routine repair and replacement:

wiper blades
air filters
oil filters
ignition parts
batteries
lights
belts and hoses
thermostats
shocks
brakes
mufflers
coolant
oil changes
spark plugs

The MEMA surveyed 10,000 U.S. households, asking people if they did this service work themselves or paid a mechanic to do it. According to MEMA, 57% said they or a friend performed the work, while 43% said they paid a mechanic to do it. Since that adds up to 100% either doing it themselves or paying for it, we decided we could give up preaching on this subject.

But wait a minute—there's a catch. The same survey showed that among typical one-owner cars (average age: four years) six of these 14 basic maintenance jobs had *never been performed*.

Every one of these 14 items affects either fuel consumption or safety or both.

There are a lot of folks in government who believe the percentage of unperformed repairs shows a need for mandatory nation-wide vehicle inspections. Do we really want to pay for such a program?

One more thing. Because of the nature of the survey, tires weren't mentioned. How long since you've checked your tires for proper inflation or really looked at the tread and sidewall wear? How about doing it today?

the Navy. The numbers compare generally with similar figures for industry and the other armed services of both the United States and Canada.

The problem until a couple of years ago, the Navy says, was getting top brass and middle management to face up to the facts of life about booze and people. Both are here to stay, and hiding a person's excessive drinking habits or punishing him rarely makes the problem go away. On the contrary they usually get worse, the individual and his family suffer all sorts of financial and domestic difficulties, he fails to perform his duties adequately if at all, and the Navy writes off thousands of dollars in lost duty time and, eventually, unlimited sums to recruit and train a qualified replacement for him.

For example: The replacement cost for a Navy pilot with just 1½ years of basic and advanced flight training is $600,000. More pilots, most of them with much more flying time, are lost to traffic accidents each year than in aircraft mishaps, and about half of those traffic accidents involve liquor.

Excessive drinking costs the Navy more than $189,000,000 every year in poor job performance alone. That's quite a bar bill! But most drinkers don't worry because Uncle Sam is always around to pick up the tab. This doesn't even touch the costs for medical treatment or the replacement of personnel who have to be mustered out or nursed along to early retirement.

Mixing pride with humility, the Navy unashamedly reports that its programs to prevent alcohol abuse save the Navy and the nation's taxpayers more money each year than any other activity except its worldwide accident prevention programs.

A recent study for the Navy by Presearch, Inc., shows that rehabilitating alcoholic members costs one-half as much overall as separating and replacing them with new personnel. For Navy careerists, the replacement cost jumps to a phenomenal five-to-one margin.

Not without some foundation, all of the military services have been accused of encouraging drinking. A Comptroller General report to a U.S. Senate committee quoted both officers and enlisted personnel as saying they were encouraged to drink by frequent "happy-hours," semi-official parties, social obligations, and the ready-availability of liquor wherever they are stationed, "even aboard ships."

NASAP (nā'-săp): A Navy acronym for everybody's personal vocabulary

The Navy in particular has had to take its lumps. National columnist Jack Anderson once wrote that the Navy was training alcoholics. *The Navy Times* carried 12 hard-liquor ads in a single issue, far more than for any other product advertised. Issues of *The Army, Air Force,* and *Federal Times* also have contained disproportionate numbers of liquor ads.

Even though many miiitary members serve relatively long hours of duty at isolated locations or aboard ships at sea, this fact alone is not considered to be a primary cause for heavier drinking. After all, military drinkers are drawn from a nation in which over 80 million people choose to drink, of whom nearly 10 million drink alcoholically. Fifty-two percent of all of today's alcoholics are children of alcoholics. So what do we expect?

As recently as April 1976 the Comptroller General reported to Congress that the Department of Defense "has not sufficiently recognized the severity of its alcohol problem; too little is being done to correct it."

"You just can't wish or hope away either your own or someone else's drinking problem," a veteran Navy chief who had twice been arrested for drunk driving told DRIVER. "Someone has to help you, and you have to be smart enough to let them."

Let's set the record straight, however, before going further. The Navy has programs to help not only confirmed alcoholics but also alcohol abusers and casual drinkers. Most of us fit into one of the latter two categories, and that's what most of this article is about.

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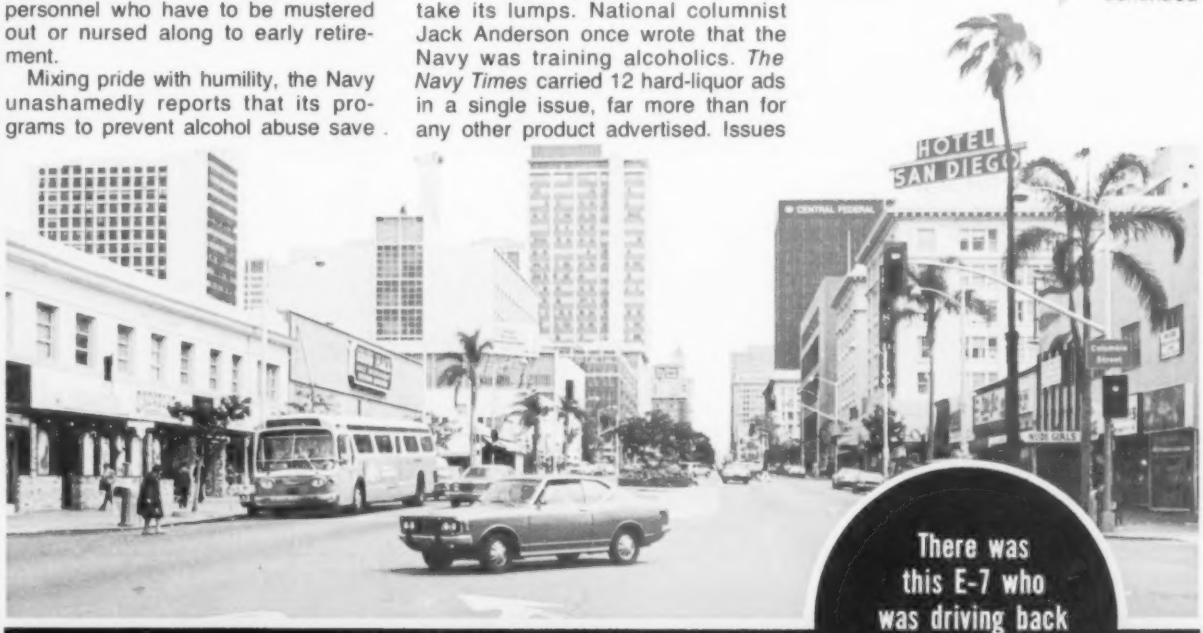
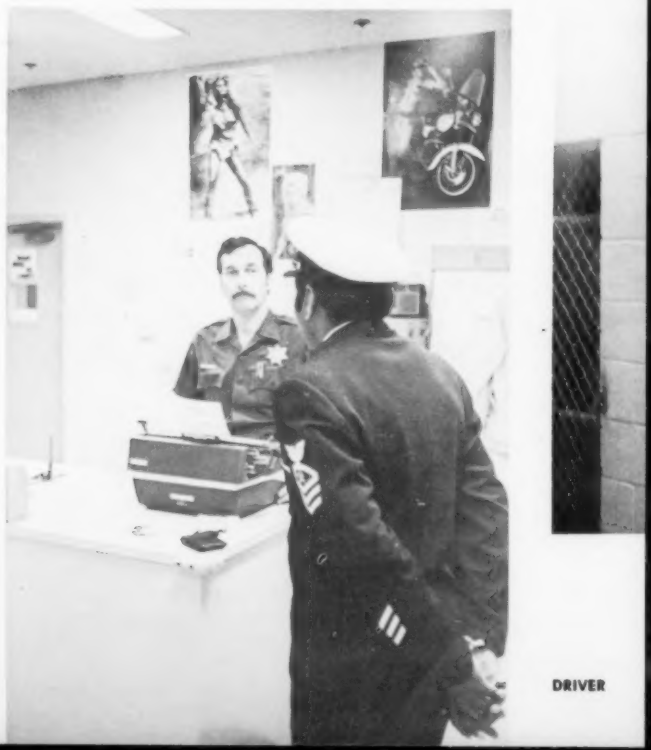


There was this E-7 who was driving back to his ship after a visit to his favorite 'Dago bar . . . next page

(left) **Driving back to his ship** after "a few beers" at a local bar, a Navy motorist is pulled over by a San Diego City motorcycle officer because his car veered across the center line on Harbor Boulevard a couple of times. (right) **"Shut your eyes** and touch your nose," seems easy until the driver, a Navy chief storekeeper (E-7), is instructed to try it.

(left) **Walking a straight line,** or attempting to, proves to be the chief's downfall. He's told he is suspected of driving while intoxicated (DWI). (right) **Placed under arrest,** the surprised petty officer is handcuffed, told what his constitutional rights are, and transported to a nearby police station for a more scientific sobriety check.

A breathalizer test shows the chief has a blood alcohol concentration (BAC) of .13, or .03 more than the minimum level necessary in most states to be declared legally intoxicated.



(right)
Life suddenly becomes complicated for another military person, as he temporarily surrenders his personal effects to an officer who then books him into jail.

"A toast to NASAP"

continued

SPECIAL SECTION

How does one know to which category he belongs? One of every 10 persons in the Navy is alcoholic and either doesn't realize it or doesn't want to admit it. Either way he needs immediate help. In the Navy he can either volunteer, or if his performance or conduct so indicates, be directed to enroll in one of the Navy's Alcoholism Prevention Programs (NAPP).

Scattered around the globe, both ashore and afloat, are four Alcohol Rehabilitation Centers (ARC), 15 smaller Alcohol Rehab Units (ARU), and 49 still smaller Alcohol Rehab Drydocks (ARD) where the Navy's more serious drinkers can receive full- or part-time treatment for periods of six to 12 weeks. Treatment can involve medical, psychiatric, or psychological approaches or all three, plus education about alcohol and alcoholism and an introduction to the principles of Alcoholics Anonymous.

In addition to service members, outpatient dependents also are treated at ARDs. Individual and group counseling, films and lectures are provided. Because alcoholism involves all members of a problem drinker's family (some authorities call it "the family disease"), dependent spouses and children also are encouraged to participate in treatment activities.

This leaves another 120,000 Navy members who are alcohol abusers or "problem drinkers" and over 200,000 additional members who are casual drinkers. Anyone in these two groups may go on to become alcoholic and/or to commit alcohol-related offenses, but if they meet up with NASAP first, they stand a fantastic 95% chance of avoiding not only alcoholism but also additional such offenses.

That's the glowing success rate for graduates of the Navy's first NASAP school at Pensacola, Fla., Naval Air Station after two of its three years in operation. More than 3,000 persons have received NASAP diplomas at six different schools since Pensacola first opened its doors to a class of drunk-arrestees in September 1974. If the 95% success figure continues to hold up, it means that nearly 2,900 Navy members still have "clean" records.

Other NASAP schools are located at Navy facilities in Norfolk, San Diego, Jacksonville, Pearl Harbor, New London, Conn., Seattle, and Washington, D.C. Additional schools are scheduled to commence operations at Subic Bay, The Philippines, on June 20; Charleston, S.C., July 11; Rota, Spain, July 25; San Francisco in August; and Orlando, Fla., in the Fall. Enough classes will be provided by then to cover 62% of all Navy personnel and most Coast Guard members. NASAP detachments also are being considered for Navy bases in Memphis and Puerto Rico.

The Marine Corps which already utilizes NASAPs located near Marine

continued

An unhappy chief contemplates his future as he sobers up behind bars, waiting for someone to post his bail 13 hours later and for freedom pending court arraignment, usually within 72 hours.

The moment of truth arrives when the 15-year Navy vet pleads guilty to DWI. With mixed emotions, he accepts a $275 fine then hears the judge reduce it to $175 if he desires to attend a six-week NASAP course. The chief reluctantly accepts, not knowing the school can bring him benefits far greater than his $100 savings.

About 12,000 DWI suspects face City of San Diego courts annually, 3,000 of them military drivers—mostly Navy and Marine Corps members.

"A toast to NASAP"

continued

Another DWI arrestee, also a Navy chief petty officer, reports to the San Diego NASAP office for a screening interview and immediately vents his hostility on the counselor, right. He cools off, however, as he discovers his interviewer is a recovered alcoholic and a sympathetic listener, and he freely discusses the drinking problem that led him there.

installations, is reported contemplating development of its own alcohol safety action program patterned after the Navy's. Camp LeJeune, N.C., and Camp Pendleton, Calif., would be likely locations, a source indicated.

Both the Army and Air Force, which have their own programs for drunk drivers and other types of alcohol abusers, are reported to be interested observers of NASAP. The Army assists its members through Alcohol and Drug Abuse Prevention and Control Program (ADAPCP) facilities at each of its installations. The Air Force has base-level Social Action units handling both alcohol and drug problems among its personnel as well as regional rehabilitation centers for alcohol abusers.

Just what is this alleged miracle called NASAP? The Navy calls it a system of cooperation, a system of alternatives. A system that coordinates military and civilian law enforcement with existing alcohol programs. A new system of education and prevention. A system that helps people.

NASAP is jointly sponsored by the Bureau of Navy Personnel (BUPERS) and the Naval Safety Center ar Norfolk and is part of the overall Navy Alcohol Prevention Program. It was modeled after its civilian counterpart, ASAP, the Alcohol Safety Action Program which was established in various communities across the nation in 1971 by the Department of Transportation's National Highway Traffic Safety Administration.

NASAP was formally initiated in 1973 by joint service and Navy directives. The Pensacola pilot project was launched in September 1974 under a developmental contract with the nearby University of West Florida, assisted by DOT and the National Institute of Alcohol Abuse and Alcoholism. The almost fantastic success of this first class resulted in the opening of NASAP's second detachment at Norfolk in January 1976 and its third at San Diego in October 1976.

Don't think NASAP is the brainchild of some shrink whose closest association with booze has been sickbay alcohol. It was conceived and developed in large part by men and women who "have been there . . . and back again."

About half of the people who run the Navy's alcohol education and rehab programs—directors, counselors, and support staff—are sober alcoholics who have recovered or are still recovering from the disease. They include officers and enlisted personnel as well as civilian employees. Many civilians are former military members (from all services) who became alcoholics while on active duty. Some were even discharged or retired because of their drinking.

"In other words," a NASAP worker told DRIVER, "we approach alcohol abuse with realism, compassion, and understanding that all persons are human and deserve another chance."

The basic approach of NASAP, as well as ASAP, is that:

- Through crisis intervention (like being busted for DWI) an individual who may be abusing alcohol or drifting into alcoholism, will be motivated to take positive action about his problem.
- With sufficient facts on alcohol use, the nonalcoholic will be capable of making sound decisions about his own use of alcohol.
- Through the remedial education provided by NASAP, he can return to his command with better attitudes toward himself and others and his own drinking pattern and behavior.

Nearly every critique sheet completed by NASAP graduates to date verifies these points (read some testimonials beginning on page 8).

The NASAP course consists of 36 hours of classroom instruction—two three-hour sessions a week for six weeks during evening hours when most persons are off duty. Once enrolled, attendance is mandatory and missed classes must be made up.

Classes are taught by facilitators who themselves must undergo 40 hours of training, regardless of their previous training. They are employed and trained by the University of West Florida under contract to the Navy. Any man or woman, including active duty personnel, can apply for a facilitator's job (which currently pays $10 an hour) at his nearest NASAP.

Here are the highlights of what you'll get in 12 sessions of NASAP:

- An introduction to the severity of alcohol problems with particular emphasis on the drinking driver.
- A review of Navy regs on the subject.
- The medical aspects of alcohol and what alcohol does to your body and mind.
- Legal implications of drunk driving.
- Symptoms and phases of alcohol use and abuse.

- Attitudes and values related to both alcohol and your drinking pattern.
- Support available from other organizations and agencies such as Alcoholics Anonymous.
- The effects of alcohol abuse on one's husband or wife, children, and other family members and friends.
- Exploration of the supervisor's job in supporting the Navy Alcohol Prevention Program.

Under its unique contract which this fiscal year will exceed $700,000,

"An enemy who can cripple one-third of your crew and wipe out your operational effectiveness rating demands your attention."

Capt. J. R. Tappan, USN, Commander, Naval Alcohol Rehabilitation Center.

The screening interview usually is the first opportunity for a NASAP candidate to officially discuss his experiences with alcohol on a one-to-one basis without fear of possible punitive and disciplinary actions. Here a 21-year-old E-4 radioman from an LST in San Diego Harbor raps with his counselor before filling out a questionnaire and course enrollment forms. An interview normally lasts about two hours.

UWF—through its Professional Education School—not only employs and trains facilitators but also coordinators, counselors, and clerical personnel to staff NASAP detachments around the world. It also provides curriculum guidance and materials.

In charge of this important phase is UWF's Dr. Phil Bromley, a young, dynamic, down-to-earth consultant on human development who personally helps to train every NASAP worker. He is regarded as NASAP's co-developer with George Gilpin, Pensacola NASAP director, and Cmdr Gerald A. (Jere) Bunn, the Navy's project coordinator.

NASAP is many, many things but more important perhaps is what it is not, especially to the active duty man or woman who faces remedial action for an incident or performance of duty involving alcohol abuse. It IS NOT a form of military punishment or necessarily a substitute for civilain punishment. It IS a truly viable alternative to disciplinary action available to commanders, supervisors, and the courts. It IS education and is so recorded in a participant's official education file as a credit course in self-improvement. Each graduate receives four continuing education units (CEU) from the University of West Florida.

You don't have to be busted by a cop or the Shore Patrol for driving under the influence to sign up for or be referred to NASAP, although its primary purpose is to prevent traffic accidents involving drinking drivers. It's also great for any Navy or Coast Guard person up for a captain's mast, a Marine due for office hours, or an Army or Air Force member charged with an Article 15 relating to alcohol, unless the person's drinking causes other problems such as property damage or a crime requiring punitive or disciplinary measures. In fact, JAG-types aren't even involved in NASAP.

Anyone being considered for nonjudicial punishment (NJP) involving alcohol abuse for such problems as fighting, unauthorized absences, excessive sick call and hospital treatment, or poor job performance due to hangovers is likely to welcome NASAP. What's more, any active duty member of any American armed service can voluntarily enroll in a NASAP class. In addition, in accordance with Navy regs on alcohol abuse, any Department of the Navy civilian can attend voluntarily on a space available basis.

Some commanders are afraid to send persons to a NASAP class. They believe their people will be labeled "alcoholics" and their careers will be hurt.

"That's hogwash!" declares Commander Bunn, NASAP project coordinator. "There's no stigma attached to graduation from NASAP. NASAP educates, not rehabilitates. NASAPers are not alcoholics.

"A lot of commanders also are afraid to say one of their people has a drinking problem, because they're looking at themselves. They don't want to admit that they are alcohol abusers, too.

"Don't confuse us with Carrie Nation," interjected the veteran officer, himself a recovered alcoholic who entered the program after being arrested for drunk, wreckless, and hit-and-run driving and then rescued by an enlightened judge who directed him to treatment. "We're not trying to tell people not to drink—we just tell them to drink responsibly."

Commander Bunn pointed out that commanders who rationalize their actions usually have a couple of favorite expressions which go like this:

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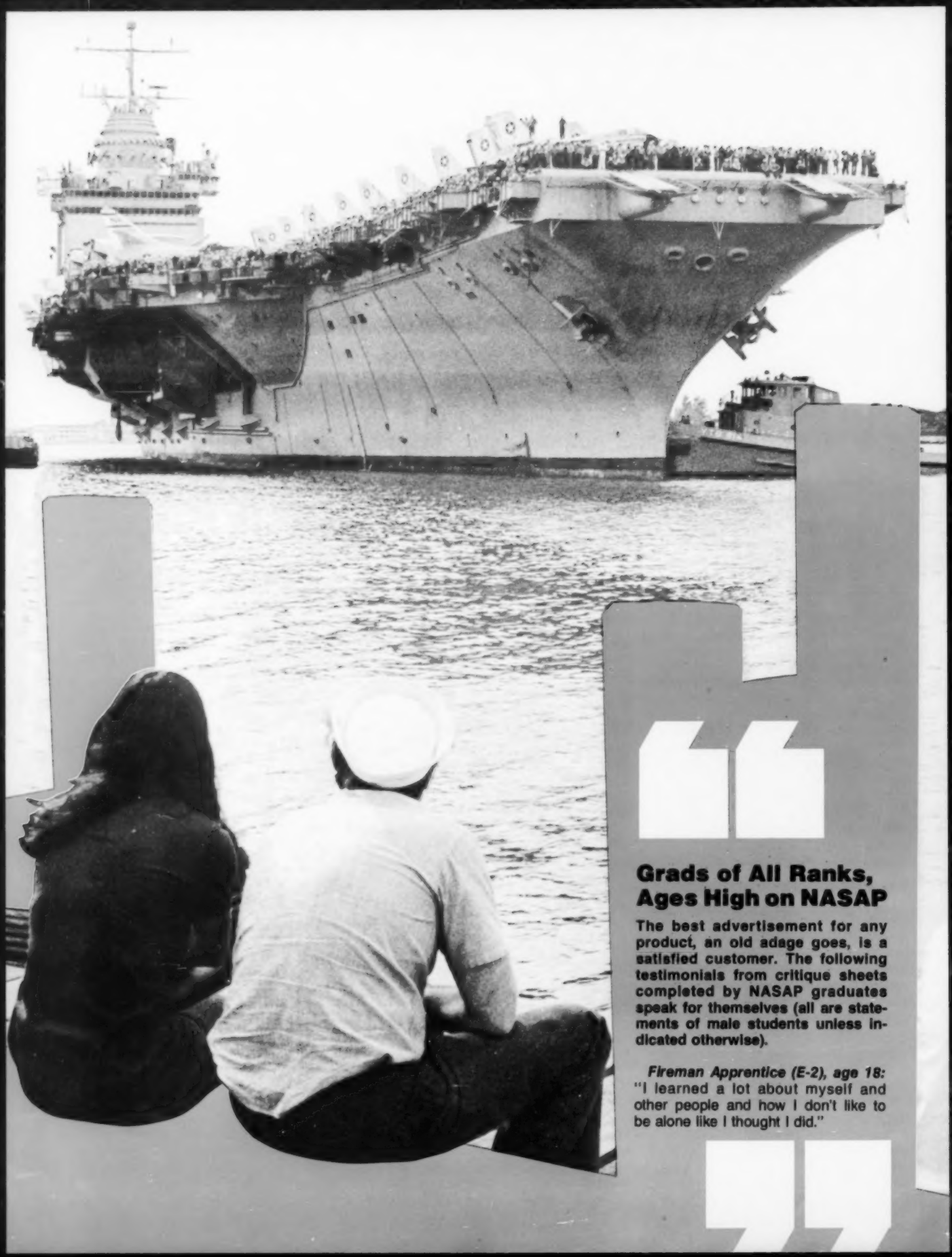

Grads of All Ranks, Ages High on NASAP

The best advertisement for any product, an old adage goes, is a satisfied customer. The following testimonials from critique sheets completed by NASAP graduates speak for themselves (all are statements of male students unless indicated otherwise).

Fireman Apprentice (E-2), age 18: "I learned a lot about myself and other people and how I don't like to be alone like I thought I did."

"A toast to NASAP"

continued

SPECIAL SECTION

"It (the drinking problem) isn't that bad yet," and "I'm going to let him do it (solve the problem) on his own."

Whether or not you are an alcoholic or alcohol abuser requiring rehabilitative treatment—not just education—is determined during the NASAP screening process. Should you get a ticket for drunk driving, for example, and be referred to a NASAP class, you first visit the NASAP detachment office for an indepth interview with a trained counselor. Based on the counselor's findings, instead of being enrolled in a NASAP class, you may be referred to one of the Navy's three types of alcohol rehab facilities, an ARC, ARU, or ARD, for further evaluation of your drinking problem and possible treatment.

"About 20% of all NASAP candidates have an immediate need for treatment at a rehab facility," Commander Bunn said.

To determine if NASAP really is the greatest invention since sliced bread, DRIVER spent three days in sunny San Diego, California's second largest city with 800,000 residents. "Dago" is no different from any other metropolitan area in the U.S. when it comes to drunk drivers—with one major exception. There are 85,000 active duty Navy, Marine Corps, and Coast Guard personnel and a handful of Army and Air Force types stationed there, and an unusually large number apparently are hard drinkers.

"Would you believe," San Diego Deputy City Attorney Elliott Moses asked us quizically, "that of 20,000 arrests for DWI (driving while intoxicated) in San Diego County last year, San Diego City accounted for 12,000? And of this number, 25% or about 3,000 were military drivers?"

"Well, if you say so!" we replied, unable to think of something more intelligent to say. "That's a ton of court fines for your city treasury. Your traffic cops must be working overtime, or are they on the quota system down here?"

Moses, a former Navy E-5 combat aircrewman on an ASW chopper aboard the USS Princeton, took our good natured jibes at the local gendarmes with a smile.

"Actually," he continued, "thanks to a five-year, federally-funded program, San Diego City police officers are probably better trained in traffic safety enforcement than any other department in the country. We have a special group of officers called the 'Deuce Squad' because they specialize in '502' arrests. They patrol the streets from 8 p.m. to 6 a.m. every night looking for drivers who have had too much to drink or may be high on drugs. Most of our DWIs are picked up during these hours. People around here know about the 'Deuce Squad,' so they are more cautious about drinking and driving. That's what we want them to be—we don't want to arrest them."

NASAP students complete a written exercise as their class facilitator, Coast Guardsman Stillman McKerley, standing, reviews his outline for the evening. NASAP is a six-week, 36-hour course which participants attend in their off-duty time. Certificates of successful completion are awarded and four continuing education units (CEU) from the University of West Florida are credited to each graduate's official education file.

Traffic safety enforcement doesn't come cheap. "Every time an officer flips his red light on," Moses related, "it costs the taxpayer about $300 . . . and our officers arrest only about half the number they stop."

Moses praised the Navy for its alcohol education and rehab programs. "The Navy is pulling the stroke oar in showing the civilian community what can be done," he declared. "It's showing both local and state governments that repeat arrests for drunk driving can be prevented."

"But getting persons to attend NASAP is still a problem" according to Commander Bunn. "Most students are referred to NASAP by the Shore Patrol or the courts, but the commands are the greatest potential source of supply. Most commanders don't even realize the 'clout' they have."

OPNAVINST 6330.1 reads: "Alcohol abuse and alcoholism to any degree constitutes an unacceptable loss to the Navy . . . commands are responsible for identifying alcoholic persons and ordering them into rehabilitation whether or not they first seek or volunteer for treatment."

continued

Seaman Apprentice (E-2), 18: "For one thing I was really getting down on drinking. What I mean is I was drinking more. My work was going downhill. The classes opened my eyes to what could have happened if I had continued to do my nightly thing."

Fireman (E-3) 18: "In some ways I'm glad for getting picked up. If I hadn't been, I most likely wouldn't be here."

"A toast to NASAP"

continued

(left)
A leading proponent and pioneer in the Navy's alcohol education and rehabilitation efforts has been Capt J. R. Tappan, commander of the San Diego Naval Alcohol Rehabilitation Center who also oversees NASAP. He is a veteran carrier aviator and former jet attack squadron commander.

Heading up Evaluation and Analysis for both the Navy's alcohol rehab and education programs is Lt Cdr Steven F. Bucky, Ph.D., a clinical psychologist. His charts show NASAP pays for itself many times over.

Comparing notes on how other NASAP units are doing worldwide are San Diego Deputy City Attorney Elliott Moses, leading civil advocate of the program in his area, and Dr. Phil Bromley, University of West Florida human development specialist who helped to develop NASAP at Pensacola. Moses is a former E-5 sonarman on a Navy ASW chopper.

(left)
Frequent "bull sessions" with staffers and instructors alike permit NASAP's project coordinator, Cdr Gerald (Jere) Bunn, to maintain both flexibility and informality in his global program. L to R are LCdr Dick McEwen, public affairs officer; Sue Sampson, San Diego NASAP detachment coordinator; Cdr Bunn; and Dr. Phil Bromley, University of West Florida consultant and NASAP co-developer.

Conducting NASAP classes as well as training facilitators to instruct them is the contractual responsibility of the University of West Florida. Seen here giving a new class of facilitators part of their 40-hour training program is UWF's human development consultant, Dr. Phil Bromley.

This means, for example, that instead of throwing a sailor into the brig, fining him, taking away his pay, reducing his grade, restricting his off-duty privileges, or reprimanding him, or any combination thereof, a commander is free to suspend all or any part of the sentence and to direct him to NASAP for evaluation.

The same unwritten law is also being followed by most civilian court judges familiar with NASAP. In San Diego where there are 250 busts for DWI and another 400 alcohol-related arrests of military personnel each month, NASAP is an "exciting sentencing alternative" for the courts and "an attractive plea bargaining tool" for prosecutors, according to Deputy City Attorney Moses.

To see how NASAP actually works in the community, DRIVER spent an afternoon in San Diego Municipal Court watching Judge Earl K. Adams hand out sentences to about three dozen male and female traffic violators, about one-third of them Navy and Marine Corps members. Standing before him was a Navy enlisted man, about 23, sporting a full beard and dressed in faded blue jeans and yellow T-shirt.

"Guilty . . . but I'm broke," the dude said dejectedly after listening to Judge Adams charge him with speeding and driving with a blood alcohol concentration (BAC) of .18, then recite his rights to have legal counsel and ask him how he wanted to plead.

"That's a pretty high breath reading," admonished the judge. "I'll give you credit of $30 or a full day for the 17 hours you spent in jail. If you want to go to NASAP, I'll reduce it another $100 and let you pay off the remaining $170 at $25 a month. Would you be interested in NASAP?"

The sailor nodded his head affirmatively. "Yeh, I guess so."

"All right, see the court clerk," Judge Adams instructed. "Good luck at NASAP. I don't want to see you in here again."

The next person to approach the bench was a Navy chief petty officer (E-9), about 40, neat appearing and smartly dressed in his blue uniform which glistened with hashmarks and several rows of ribbons. He obviously was irritated and embarrassed as Judge Adams commented that he had a clean record up to this point. The chief plead guilty to DWI with a breath reading of .13 but declined the judge's fine-reduction offer if he attended

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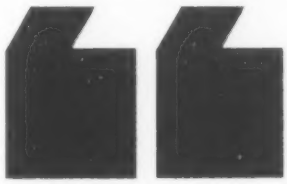


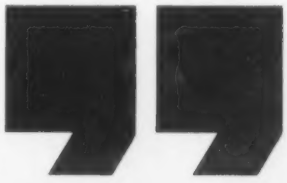
Fireman Apprentice (E-2), 19: "The course has helped me to be able to look at myself and to realize my problem with alcohol and to be able to talk about it with others and ask for help."

Seaman Apprentice (E-1), 22 (female): "I didn't know what to expect of the class but it has taught me more than I've learned in my 22 years of living. When I came here I was down—down on myself, down on life, down on people. Now I'm finding out what life is all about. This class made me find out that I am actually an alcoholic and that I can stop drinking. I don't have to be good at everything to be of worth."

Air Controller 3rd Class (E-4), 22 (female): "I thought I was going to be treated as a hard-core alcoholic instead of a chick with a drinking problem. I was very surprised to experience the concern and kindness that came along with this class. I also thought the classes were going to be a classroom, student-to-student sort of affiar, but I found them to be relaxing and, for me, in the best possible atmosphere for learning. I am becoming more aware of my actions, taking into consideration more the feelings of others and how I may be indirectly influencing them. I don't even drive when I drink!"

Disbursing Clerk 2nd Class (E-5), 24: "Every journey begins with the first step. Here I've learned in which direction to go."

Staff Sergeant (E-6), USMC, 25: "I'm seriously considering giving up drinking completely knowing I never will drink and drive again."



"A toast to NASAP"

continued

NASAP. Asked "Why?" by the judge, the airedale replied that his carrier was putting out to sea for maneuvers and therefore he couldn't attend the San Diego course. He quickly paid a $275 fine in cash and departed.

This man apparently was unaware that he could still have made arrangements to attend another NASAP school or could have spaced out his attendance every time his ship arrived in port.

"In any event," a Navy Shore Patrol chief on hand to assist the court observed, "he really missed the boat. That's the trouble with some of the senior people who come in here. They buy their way out. They think NASAP is for alcoholics or for young sailors who can't handle their booze. They think NASAP will hurt their careers. If they only realized how wrong they are and how much good NASAP can do for anyone who drinks."

No system is perfect. But it appears that the Navy not only has a handle but also a firm grip on the drinking problem. No organization or agency, except Alcoholics Anonymous, has ever been consistently successful in reducing alcohol abuse within its ranks in large numbers.

"The beauty of our program," Commander Bunn concluded, "is that anyone who walks through a NASAP door is going to get help—he isn't going to be turned away. He will either get a 36-hour education course or a six-week program in counseling and treatment. He isn't going to be punished and his career won't be hurt."

(EDITOR'S NOTE: DRIVER sincerely appreciates the generous cooperation of numerous persons photographed and quoted in this article whose identity is not revealed because of the subject matter. In addition, DRIVER wishes to thank the Bureau of Naval Personnel; Navy Bureau of Medicine and Surgery; Navy Alcoholism Prevention Program; Naval Safety Center; University of West Florida; and the many staff members of the Navy Alcohol Rehabilitation Center, Navy Alcohol Safety Action Program headquarters, and the NASAP Detachment, all in San Diego, as well as the Pensacola NASAP Detachment, without whose assistance this story could not have been written.)

Seaman (E-3), 25 (female): "I feel that because of this course, I'm a better person because I understand myself more and understand my problem better. This course is highly educational and made me stop and take inventory of myself and where I was heading. Thanks to it, I think I am on the right track . . . I do not have the compulsion to drink. I can find better things to do."

Engineer's Mate 3rd Class (E-4), 25: "I wasn't preached to and I learned a lot more than I thought I would."

Petty Officer 2nd Class (E-5), 28: "When I first arrived, I felt the only reason I was here was because I was sent. As the class progressed, it became interesting. The farther we went the better it got. I highly recommend this school to any person who thinks he has a problem or knows anyone who does."

Personnelman 3rd Class (E-4), 28: "It was probably the most valuable course that I have taken in 16 years of education—valuable because it may have saved a lot of unnecessary hardships and pain, for myself and my family."

1st Lt, USMC, 30: "It has offered me much insight into what alcoholism is really all about. This has changed many of my ideas and values about alcohol. I'll never drink while I drive again—that I mean! This course really brought my attention to a problem I've had for several years. I can identify it now and deal with it as a mature adult."

Hull Technician 2nd Class (E-5), 31: "I thought it would be a lot of preaching about the wrongs I have done and about being an alcoholic. It was just the opposite."

Aviation Metalsmith 2nd Class (E-5), 32: "No more driving while drinking—I'm going to watch out for the other dude who hasn't been through DWI school."

Hull Technician 1st Class (E-6), 33: "I always thought that school was only for the drunks, but little did I realize I had my sea bag packed and was headed down the same road."

Lieutenant, USN, 33: "I came almost because it was required but rapidly developed a feeling of belonging and an eagerness to attend. Just the introduction to Alcoholics Anonymous made the whole effort worthwhile."

Aviation Electrician 1st Class (E-6), 34: "I think this class should be given to all military personnel. Had I had it prior to my DWI, I would not have gotten one and would have given up drinking earlier."

Thirty-two of 40 hours of instruction given all NASAP facilitators is devoted to instruction skills, the remainder to curriculum. Emphasizing the importance of two-way communication to a new class of facilitators in San Diego is NASAP project coordinator Cdr Gerald (Jere) Bunn.

Staff Sergeant (E-6), USMC, 34: "It made me stop and think about where I was headed instead of where I wanted to head."

Senior Chief Electronics Technician (Submarine) (E-8), 35: "I would recommend that all senior enlisted and officer personnel be required to attend this course to enable them to better understand the problems concerned with alcohol and its effects, and to be aware of the changing Navy attitude toward alcohol so they might reflect their attitudes in their dealings with their juniors."

Dept. of the Navy Civilian, 38 (female): "I have already begun changing acquaintances, becoming more active in sports (tennis, swimming, golf). I was already very tired of sitting in bars talking or listening to the same old subjects. Too many people associate drinking with being social."

Major, USMC, 38: "This course should be adapted as an awareness course for supervisors, i.e., preventive medicine. Overall a super course, well presented by a couple of pros. The course exceeded my expectations. The information not only helped me personally but as a supervisor. Drinking-related functions are no longer super-important. I am not now drinking to maintain an 'image'."

Captain, USN, Submarine Commanding Officer, 45: "I am definitely more conscious and aware of my limitations on how much I can drink and still remain responsible and fully conscious of my actions and behavior. The course changed my whole attitude and outlook on drinking and in all likelihood prevented any future crimes (DWI) from happening."

Commander, USN, 45: "I am more aware of problems caused by booze and what can be done to overcome them. It has caused a deep thinking about problems that I may have caused and that I hope I will be able to control in the future. I believe this course has helped me look at the more inportant things in life and to be completely happy with myself."

Captain, USMC, 47: "I believe intervention prior to 'hitting bottom' is possible. More ground was covered than I expected. Insight from the instructors' experiences and Alcoholics Anonymous visits were very helpful."

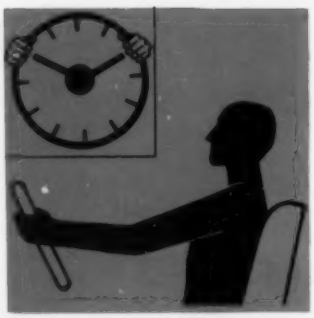
DRIVER PERSONALITY INTERVIEW:

TWICE WORLD CHAMPION DRIVER,

Emerson Fittipaldi

When Emerson Fittipaldi was just a small boy growing up in Brazil, he stood on his tiptoes, peeked into the cockpit of his father's sports car, and knew he wanted to be a racing driver.

As a boy, he climbed onto a motorcycle and learned to go flat out on a dirt track; he was winning races when he was only 15 years old.



The "10 and 2" position of hands on the steering wheel. Emerson feels steering to be the most important part of a car, and with your hands on the wheel in this manner, your chances of retaining control are better, even in the case of a mechanical failure.

He then graduated to go-karts, and when he was old enough to think about serious sports car racing, his father warned him, "I will not give you money, but I will give you advice . . . take the sport seriously . . . don't use it to impress girls or puff up your ego."

How well did Emerson follow his father's advice? Well enough to become World Driving Champion two times, and well enough to begin building his own racing cars designed to carry him to another championship in the future.

(left)
Emerson Fittipaldi, twice World Driving Champion, at the wheel of his personally-designed Copersucar Formula 1 racer.

Emerson demonstrates the correct left hand position on the steering wheel. His personal car is fitted with a wheel of his own design that has grips that place the hands in the desired position and provide thumb recesses for better control in corners.

Although Fittipaldi has built his own Formula 1 car, he still takes time to give his personal car a pre-drive check almost every day. Attention to detail like this is considered by Emerson to be "one of the cheaper forms of life insurance."

Emerson Fittipaldi *almost* did not become a world champion driver, though. His life, and that of his wife, was nearly snuffed out one night on a rural road in France, when an erring driver pulled from an intersection directly into the path of the oncoming Fittipaldi. Emerson, despite a broken sternum and three broken ribs, managed to free his injured wife from the wreckage, and although both have recovered perfectly, Emerson began to reconsider the various facets of the thing we call "safety."

Emerson laughs momentarily when he talks of the driving habits of his countrymen and how they helped him establish a driving style of his own.

"When you are in a motorcar on the streets of Sao Paulo and a traffic light turns green, it is a much more dangerous situation than the start of any race.

"When I am on a track, I am in the company of *professionals,* and their action, barring mechanical failures, is *predictable.* The drivers you see around you on the street are anything *but* predictable; you cannot count on them to always do the right thing. That is why you, as a driver, have the responsibility to (at this point, he gave a phrase in Spanish which literally translates to "drive *all* the cars").

continued

By "driving all the cars" Emerson means a driver must not only plan how he himself will handle traffic situations, but how *other* drivers *may* react to various traffic events. Emerson is a firm believer in "leaving yourself an out" but he also believes that you must do the same for other drivers who may not consider this action. He will position himself in traffic so that the drivers around him have adequate space to take evasive action. It may sound complicated, but just a foot here, or two feet there, can leave other drivers an escape space. This not only benefits the other driver, but may save *you* from getting a crumpled fender or worse.

Race Driving On the Street? Emerson has drawn some conclusions about how race driving can apply to street conditions. Of the Long Beach, Calif. Grand Prix course, he says: "It is quite different from most of the other courses, Monaco included. It is so narrow and twisty . . . rather like a wide street that has a lot of traffic. In racing, you must be precise . . . so it is with street driving. At Long Beach, one must be careful not to run over the curb because this can damage suspension components. If you hit a curb in your street car, several things can happen, too . . . all of them bad. First, you may damage the suspension: this can be expensive to replace and *could* lead to an accident if you are unaware that you have pranged some pieces. Second, hitting a curb will change your direction, and if you accelerate you may go into opposing traffic or rear-end someone. Third, the curb may grab your car and throw it onto the sidewalk and you could injure a pedestrian.

"Car modifications can make a difference, too. Only in America do I see cars with their back ends jacked-up . . . they look so funny. But there is a serious side. When one is rounding a corner, one must slow down before the corner, and then accelerate after the corner. This high-backed car we talk about, it cannot properly use the weight-transfer that the engineers have designed into it, and it may tend to come about (swap ends) under hard braking or slide away during acceleration, neither situation being what you Americans call the 'hot set-up.'

"When I make modifications to either my personal or my racing car, I *always* take into consideration the effects these modifications may have. Big wheels and tires on the rear may look good and aid somewhat in traction, but they also alter the front/rear weight bias that engineers originally programed for the car. This can affect handling markedly.

"Another modification that absolutely astonishes me is the use of welded chain for a steering wheel! I cannot comprehend the total amount of bad effects this may have. Steering is the most important part of a car, *including brakes*, and to change it in this manner is unthinkable. Why, the chain offers no traction for the hands . . . it is so slippery. Decreasing the radius of the steering wheel raises steering effort, too. The welded chain is strong enough to do injury to your rib cage in an accident, but probably not strong enough to withstand a lot of left-to-right twists or support your weight during deceleration. If you must modify your steering wheel, *please* buy a good aftermarket wheel from a reputable company . . . preferably one that is slightly dished and offers flanges, or finger holds, that place your hands in the correct 9 o'clock and 3 o'clock positions."

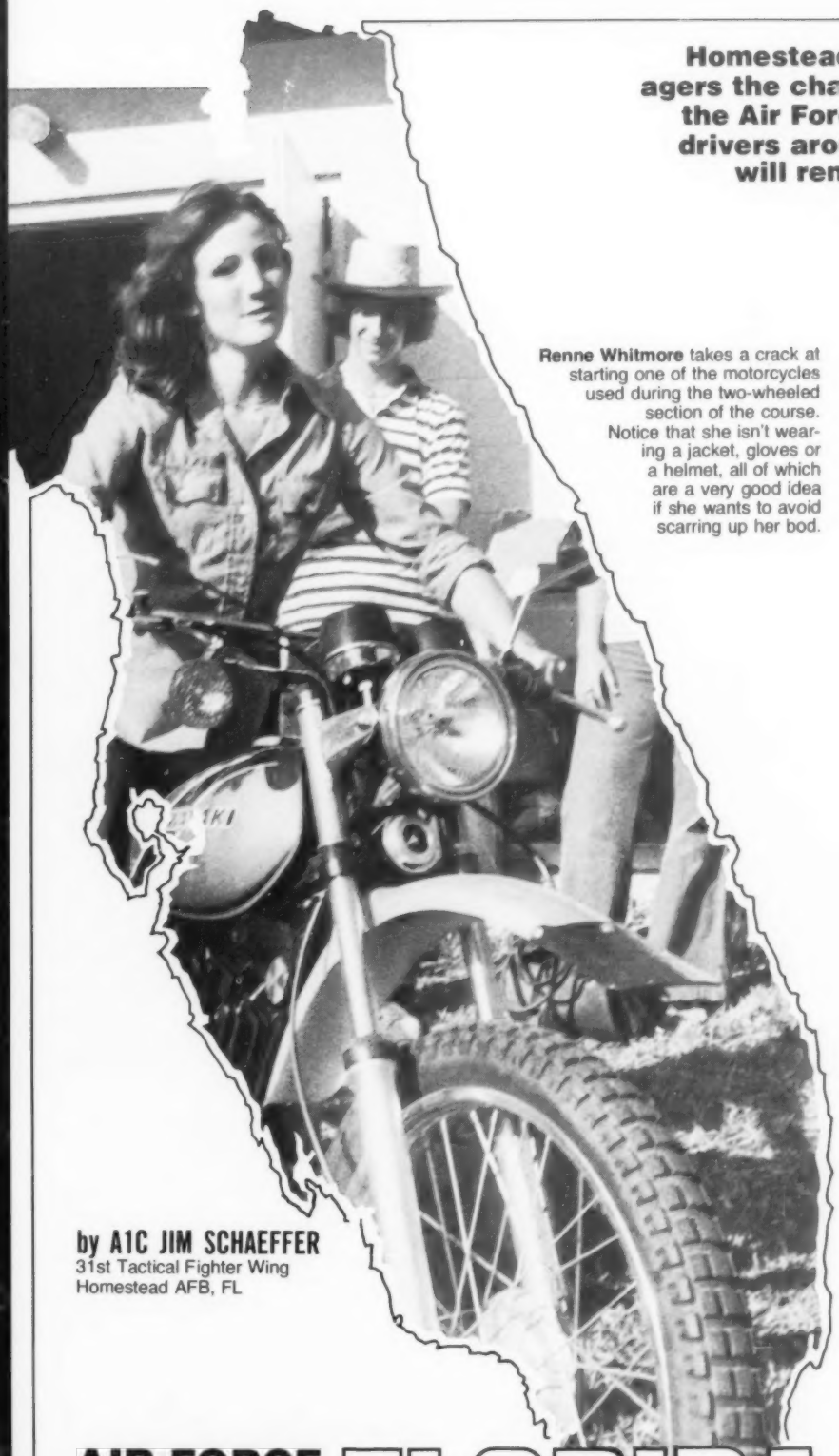
Mechanical Failure. Mechanical failure is Emerson's only fear while he is behind the wheel. "For a fraction of a second, you change from driver to passenger . . . because the car drives you and you have no control. I give my personal cars pre-ride checks almost every day and a thorough check weekly. It takes only a few minutes and is one of the cheaper forms of life insurance. I wear my seat belts, too. I was involved in a crash that demolished the car except for the seat. The only reason I was still *in* that seat was becuase of belts."

A Pro. Twice World Driving Champion, Emerson Fittipaldi is a pro. When he talks about safety, or racing, or any related subject, he knows whereof he speaks. He doesn't have to mouth any platitudes, or tell the editors of DRIVER what they want to hear . . . he's *been* there . . . from crashes to championships. He is a man who is very much interested in keeping himself alive and well, and to do this he takes precautions. He doesn't consider himself a sissy (neither do the men he races with . . . they all take the same cautions) or an overly fussy man. It took a crash in Dijon, France, to make him think this way. When he talks, all he wants to do is save someone else from finding out about safety the hard way.

If you must buy an accessory steering wheel, be sure you get one that is slightly dished or that has protective padding in the center. In the event of a crash or rapid deceleration, either wheel can protect your sternum and ribs.

AIR FORCE TRAFFIC SAFETY FOR FLORIDA TEENS

Homestead AFB is giving local teenagers the chance to learn traffic safety the Air Force way. If you have young drivers around your house, this story will remind you of the basics you should be teaching them.



Renne Whitmore takes a crack at starting one of the motorcycles used during the two-wheeled section of the course. Notice that she isn't wearing a jacket, gloves or a helmet, all of which are a very good idea if she wants to avoid scarring up her bod.

by A1C JIM SCHAEFFER
31st Tactical Fighter Wing
Homestead AFB, FL

When officials of the Dade County, Fla., school system—one of the largest in the nation—began looking for a driving safety program they could use to teach students defensive driving and basic automobile and motorcycle safety, they came to the military experts. After all, the Armed Forces enjoy the reputation of having the most dynamic traffic safety programs in existence.

The educators met with the safety people at the 31st Tactical Fighter Wing Safety Office at Homestead AFB, south of Miami, and put together a nine-hour multi-media safety course with the young driver in mind.

Students spend one full day at the base, receiving outdoor briefings as well as classroom instruction and film and slide presentations designed to test the students' traffic safety knowledge. The actual behind-the-wheel driver training continues to be handled by the school system.

So far about 200 students from schools throughout the county have attended the course, which is tailor-made from sections of the Air Force Two-wheeled Vehicle and Defensive Driving Courses. Much of the information presented by the Air Force and Army instructors deals with problem areas of particular interest to teenagers. For instance, drinking is an area of high interest for the 16- to 18-year-olds. Whether adults like it or not, alcohol and automobiles play a big part in many teenage social activities. The students are quick to realize that the two don't mix—especially when they learn that over 60 per cent of all accidents involve drivers who have been drinking.

Many of the students find it hard to believe that only three or four drinks can make them a hazard on the high-

continued

USAF photos by
A1C JIM SCHAEFFER

MSgt Mike Miller of the 31st TFW Safety Office explains seat belt operation and use to three of the high school students attending the special course.

(right)
Army SSG Larry Struck of the 31st Air Defense Artillery Brigades Safety Office at Homestead AFB, explains proper motorcycle battery maintenance to Renne Whitmore and Fred Zinsmeister. Check your electrolyte level at least once a month and fill to the markings with distilled water ONLY.

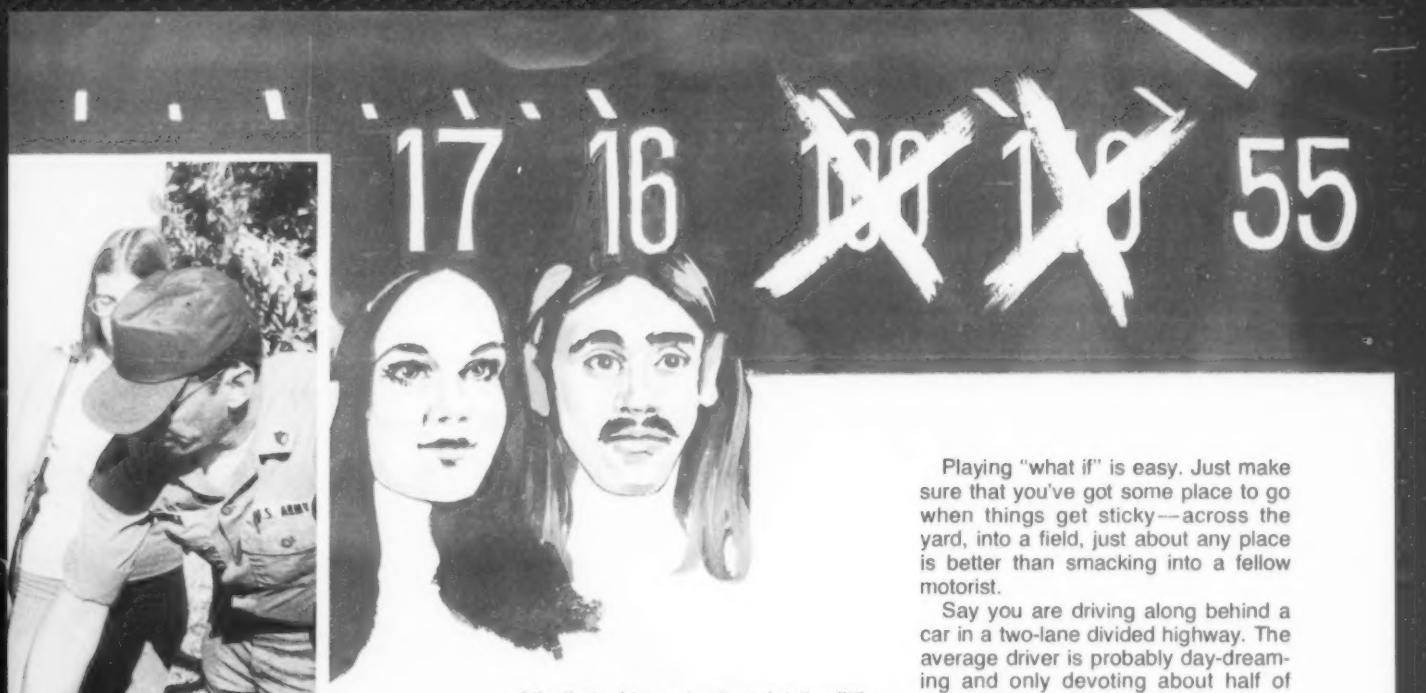
florida teens

continued

way . . . until they watch a film showing a driver in action who has four drinks under his belt. When his speech slurs and his car drifts back and forth in the lane, the taxi fare home seems pretty cheap. Especially when compared with the $500 fines that Florida traffic courts regularly hand out for driving-under-the-influence convictions.

This is the first safety instruction many of the students have ever received. Therefore, the course devotes a lot of time to preventive maintenance. The things experienced drivers know so well that they don't think to tell new drivers about. For example, the students are reminded to regularly check turn signal and brake lights operation. (The best way is to have a friend operate the pedal and signals while you verify that the lights are working properly.)

MSgt Mike Miller explains proper procedures for checking oil and transmission fluid to (L to R) Fred Zinsmeister, Renne Whitmore and Cindy Bales. Be sure you don't overfill your engine and be extremely careful if the motor is hot—bad burns are possible.



Another point of interest is investigating tire tread and windshield wipers. Sticking a penny in the grooves is the easiest tire test. If the tread is worn enough so that Lincoln's head shows, it's time for a visit to the local tire shop. The wiper check is even easier. Just spray the windshield the next time you wash the car. If it streaks when you turn the washers on, replace 'em. Both are important items to insure rain-safe driving.

And it may not seem worth mentioning to be certain your spare tire and jack are serviceable. But why should a new driver have to learn the hard way—by having tire trouble on some deserted road? (When was the last time *you* checked?)

During the vacation season, it's not unusual to see family wagons loaded to the hilt and pulling boats or trailer while their drivers try to quiet the little kids and figure out where the heck they are . . . instead of paying attention to the road. Or even wondering if the vehicle is over-loaded.

One-third of the course is designed to teach the students how to deal defensively with problems like these. About the best advice instructors give in cases like this is: if that other guy makes you feel uncomfortable with the way he is driving—get away from him AS SOON AS YOU CAN! Pass that bewildered driver or drop back far enough so that he is no longer a danger; otherwise you may wind up concentrating on him and not see other hazards on the road.

The same rule applies to tailgaters and the infamous "I-think-I'll-change-lanes-without-signaling-just-to-see-if-you-are-awake" drivers. Don't be the one who goes to court because of people who can't drive—avoid them like the plague.

Establishing buffer zones while driving is another area of emphasis. Leaving a couple of extra car lengths between your car and the one ahead is a good example of defensive driving that will pay off when the driver ahead locks his brakes to avoid a collision. The extra space will also allow you to see what's ahead a little easier so you can anticipate problems before they become repair bills.

Another form of defensive driving taught to the school students is the "what if" or escape method. For motorcyclists this has long been a simple form of survival. As any two-wheeler will tell you, one of the most frightening situations is finding yourself boxed in by 10 tons of steel.

Playing "what if" is easy. Just make sure that you've got some place to go when things get sticky—across the yard, into a field, just about any place is better than smacking into a fellow motorist.

Say you are driving along behind a car in a two-lane divided highway. The average driver is probably day-dreaming and only devoting about half of his concentration to the road ahead. However, the smart driver is leaving himself an out by thinking: "If the car ahead suddenly turns right, I will go left across . . . Nope! Here comes a car in the left lane, I'll have to use the divider." Actually with a little practice you won't even have to consciously think, your mind will tick off the options automatically.

If you do this you will be ready when an emergency hits—and that's half the battle won.

Most of the points being driven home are simply a matter of paying attention to what's going on ahead of you—everything that's going on as a matter of fact—and forming a mental picture of how you will deal with the problem.

Other ideas passed on during the defensive driving course that can help anyone to be a safer driver:

- Try turning on your headlights before it really starts getting dark. Dusk is one of the most dangerous times to drive because things go "grey," making it hard to distinguish the colors that help us spot cars. Your headlights can go a long way toward helping that other driver see you in time.
- Also, tap your brakes when you're about to stop if you're slowing down in traffic. This flashes your brake lights and lets the other guy behind you know what's going on, and it may even wake him up before he plows into your shining steel.
- Safety experts, statistical demons that they are, will tell you that the majority of automobile/motorcycle accidents are the fault of the auto drivers. This does not, of course,

continued on page 28

Are you planning a vacation by car this year? You'll have a better time if you observe proper tire care and avoid overloading the vehicle, says the Tire Industry Safety Council. Worn tires, improper air pressure and vehicle overloading should be at the top of a driver's safety check list before he leaves home.

Proper inflation is the most important rule in tire safety and tire mileage. A regular check for proper inflation, preferably every two or three weeks and before long trips, is one of the surest ways to prevent tire trouble.

The air pressure recommendation is one of the most important figures in your car owner's manual. Carry your own air pressure gauge. Service station air towers are almost always off by several pounds.

More than one out of four cars has at least one seriously underinflated tire. Tires that are underinflated by four pounds of air pressure have tread life reduced by as much as 10 per cent, and underinflation by 12 pounds can reduce tread life up to 40 per cent.

Don't Overload. Studies have shown that about two per cent of the cars on the road are overloaded by 10 per cent or more. Most overloading occurs on station wagons and passenger cars during vacation trips. If you plan to carry extra heavy loads, check with your automobile dealer, tire store or garage. You may need helper springs or heavy-duty shock absorbers in addition to a tire of greater load-carrying capacity.

At the correct pressure, your tires will carry the load intended by the manufacturer, save gasoline, and provide optimum traction and braking, easier steering, better cornering and longer tire life.

The ability of the tire to carry the design load is reduced by underinflation. Soft tires build up excessive heat and can suffer internal damage. Over-inflated tires are more susceptible to

TAKE CARE

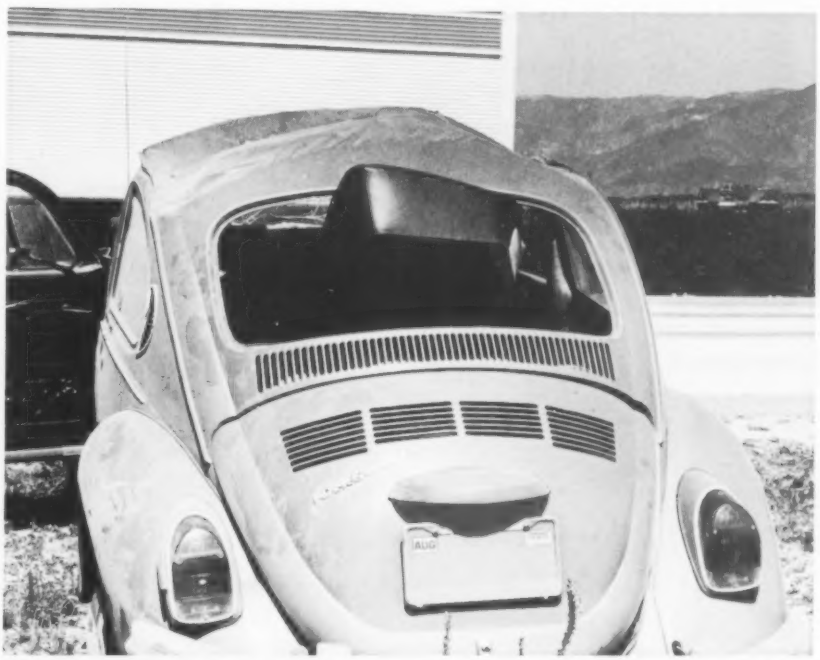
Here is a classic example of a worn tire. It's on the rear wheel of a VW that had been traveling on the freeway. Other rear tire is just as bald.

Front tires are in good condition.

bruises and may be damaged internally where the damage can't be seen. This could lead to unexpected tire failure.

The Tire Industry Safety Council offers these other tips for vacation driving:

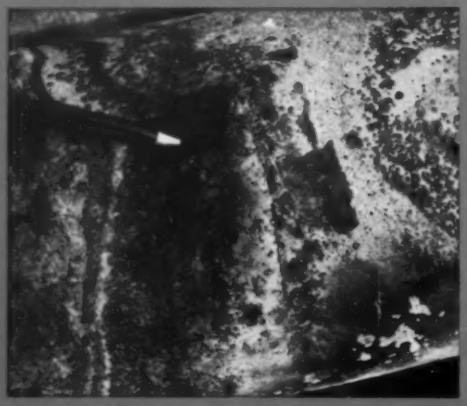
- For long distance driving at turnpike speeds, increase inflation four pounds over the amount recommended by the vehicle manufacturer. But never exceed the maximum allowable air pressure marked on the sidewall.
- Check regularly for objects imbedded between tread grooves. They can eventually cut into the rubber, leading to air loss and tire failure.
- Don't reduce air pressure after driving. Heat buildup during driving is normal and tires will cool down to proper air pressures on their own after you stop.
- Beware of "summer ice." Water mixed with dust and oil acts as a lubricant on roadways and reduces traction even if your tires are new. Particularly dangerous is a light drizzle following a prolonged dry spell.



Do worn tires cause accidents? Obviously, one of these did. When the tire blew, the VW swung around out of control, colliding with another car before leaving the pavement.

OF THE TIRES

(left) **If this kind of damage** is on top of the pipe, it's hard to detect. If the leak is after the muffler, you may not even know you have a leak! (right) **Mufflers and resonators** *usually* rust out on the lower side where you can see the damage. In a case like this, you'll also be able to *hear* that you have a problem.



(left) **Pinhole-sized leaks** are hard to detect visually. Left alone, they will rapidly degenerate to *large* holes and pose a major CO problem. (right) **This is what a backfire does.** Unburned gas accumulates inside the muffler shell and is ignited suddenly. This is irritating, but quite easy to detect!

. . . the exhaust goes 'round

EXHAUST

Three Air Force types departed a base in the southwest for a leave in New York. They were driving a '67ish model station wagon which appeared to be in good shape mechanically. They had checked the condition of the car (tires, brakes, etc.) before departing, corrected a few discrepancies, and had made it to the western part of New York State. The driver stopped the car at a truck stop so he and the front seat passenger could switch driving chores, and they opened the back so that the sleeping third member could transfer to the front. They couldn't awaken him . . . he was dead.

CO, A Killer. Colorless, odorless, tasteless carbon monoxide . . . it's undetectable without a gas analyzer, and it's the cause of many deaths each year.

Summer brings increased driving and increased chances of exposure to the hazards of CO, carbon monoxide. Don't take risks; check *now* and see if your car or camper's exhaust system is in good shape. Get needed repairs accomplished as soon as possible.

The Total System. The exhaust system is tasked with removing the used fuel/air mixture from the engine, and the process is really quite simple. As the piston returns to the top of its cycle, it forces the spent and burned air/fuel mixture (now in the form of hot gases) out of the cylinder via the exhaust valve. The gases then travel through the exhaust manifold, head pipe, muffler or resonator, and then out the tail pipe. Any component that is subject to this flow of hot gases is subject to failure. Most leakage problems stem from corrosion, but backfires, improper system support, chafing, and damage from objects in the road can all put your exhaust system in a trick, too.

Let's have a quick definition of the parts of the exhaust system so you'll know what the mechanic is talking about when he tells you the "thingie" has to be replaced.

The exhaust manifold is made from cast iron (usually) and is bolted to the engine block. It takes many forms externally, but usually it will have as many tubes, or runners, as the engine has cylinders. Two manifolds are used on V- and opposed-type engines, while most in-line engines use one. The exhaust manifold rarely fails, but the gaskets used between it and the cylinder head may blow out or rupture, and cold water applied to hot manifolds may cause them to crack.

Between the exhaust manifold and the next item in the line is a device known as a heat riser valve. This valve is operated by a thermostatic spring and provides heat to the automatic choke system. The valve is easily subject to rust damage and will "freeze," usually in mid-position. This can cause gases to be forced out at the gaskets and joining surfaces where the valve body bolts to the exhaust manifold. If the valve is stuck, removal and replacement are usually in order . . . when those critters stick, they *stick!*

Below the heat riser valve is the head pipe. This piece of metal tubing usually connects the heat riser/exhaust manifold assembly with the muffler. It is normally a short pipe, and although it *can* fail, it will fail less often than the system components farther down stream (we'll explain why a little later). Head pipe failures are mostly stress cracks caused because the head pipe connection at the manifold rusts together and doesn't allow any flexing of the pipe.

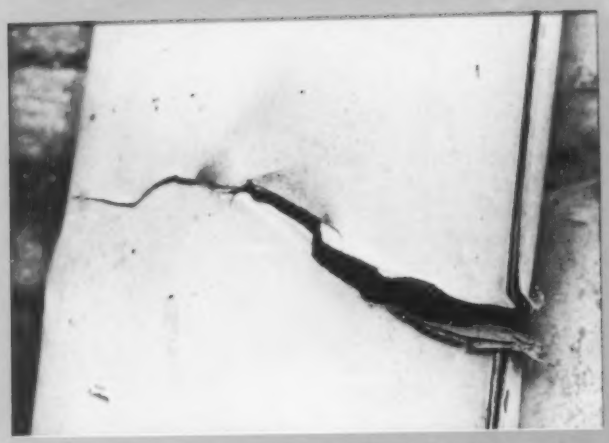
Next in line comes the catalytic converter (if required) and we're sure you've already read reams about that old cat-con. Briefly, the cat-con can fail because of backfire, excess unburned fuel caused by a badly running engine, or corrosion. A rotten-egg smell from the cat-con doesn't necessarily mean it's bad, just that the car needs a tune-up and the converter is working overtime to clean up the exhaust gas.

After the head pipe (or after the cat-con in later cars) is the muffler. This piece of equipment causes the second largest number of problems in exhaust systems. Backfires can rupture its shell, high driveway crowns can scrape a hole in it, and corrosion can put pin-holes (and eventually BIG holes) in it. If you've got a leak in the exhaust system at a point AT or BEFORE the muffler, it won't be too hard to detect, because you can normally hear the leak. Leaks AFTER the muffler can be difficult to detect because the muffler has quieted down the exhaust noise. Don't think that just because you don't hear any noise, your exhaust system is OK . . . t'aint necessarily so!

We'll go out on a limb and say that most exhaust failures occur with the tail pipe, the pipe that connects to the muffler and then runs to the rear of the car where it opens to the atmosphere. This component of the exhaust system has a high failure rate for two reasons: one is its location and, two, its routing. Location is critical because of the way the pipe is subjected to splashing from puddles. The other

continued

SYSTEMS



(left) **Backfire damage . . .** it won't happen if you keep your car in tune. (right) **Tailpipes go out** more often than other parts of the exhaust system. Water (condensation) accumulates in the lower curve areas of the pipe and causes rust to attack from the inside.

(left) **Bailing wire** and "muffler bandages" aren't exactly the recommended way to repair exhaust system damage. (right) **If you route** your exhaust pipe out before the rear axle, you'll wind up with the grundgiest wheels and tires this side of a junk yard. We wish this was a color picture . . . the hubcap is just the loveliest shade of green!

. . . and 'round

continued

system components don't often get splashed because the car's speed is sufficient to throw the water up and away from these forward mounted pieces. The tailpipe usually bears the brunt of splashed water, and is more subject to external rust. As the tailpipe curves around to clear the rear axle, shocks, bumpers, etc., it develops low spots at some of the corners it takes, and these low spots collect condensation which rusts the pipe from the inside out. Components further up the system don't have as many curves and operate at higher temperatures so they have little trouble with accumulated condensation. The tailpipe may also suffer damage from chafing and vibration.

Another prime example of the "orange juice can" school of exhaust system repair. With all the labor the owner put into making a juice can fit, he could have spent $10 in parts and had a safe, lasting repair.

Where to Check for Leaks. CO can get into your car any number of ways. You don't have to be sitting with the engine running and all the windows up to get in trouble.

One of the biggest areas of concern is station wagons. A large car like a wagon creates a vacuum behind itself as it passes through the air. This vacuum is a great place for CO to build up, even if the exhaust system is working properly. Station wagons also have that little feature known as a tailgate.

A tailgate has a lot of gasketed (weatherstriped) areas that are difficult to seal. Just because the car doesn't leak water doesn't mean it won't allow CO in through small areas. Check all areas where sealing material is present . . . any missing weatherstrip or damaged sealing surfaces should be repaired. Don't forget that in wagons with the spare tire mounted in the side

continued

If your car or RV has headers, pay attention to the gasket used at the header/exhaust pipe joint. Header installation by a qualified muffler shop can help prevent problems here.

At a qualified muffler shop, they have the right tools to diagnose and repair exhaust systems. An added benefit is that good shops will also take a quick look-see while the car is on the lift and can point out problems with tires, shocks, and body corrosion.

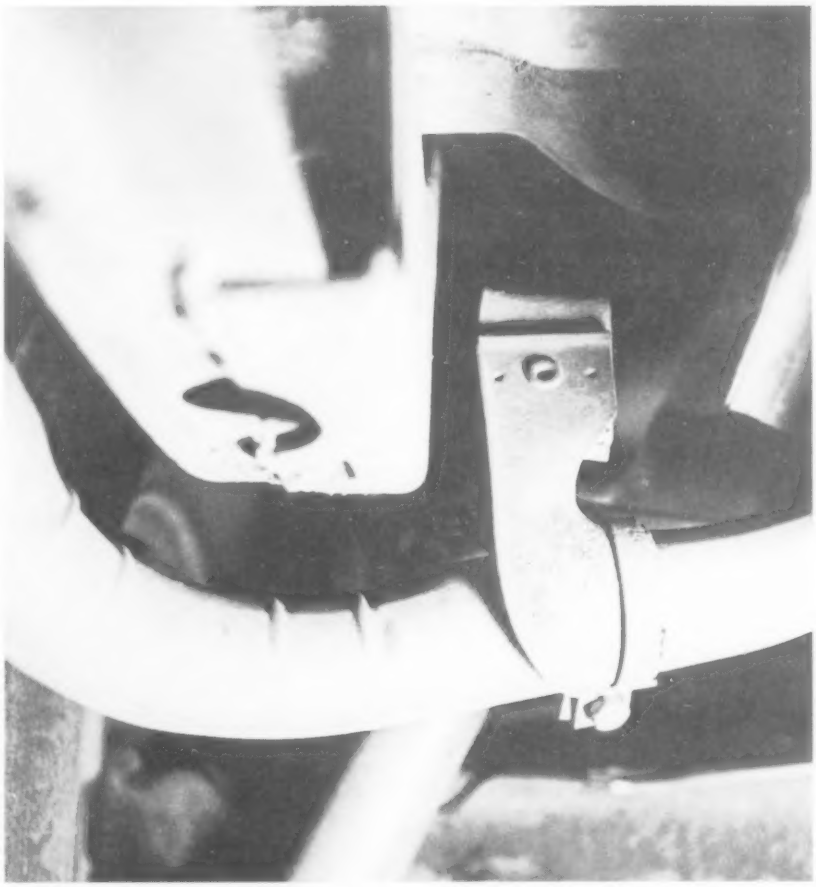
of the compartment, there is a drain hole in the tire storage well. This can allow CO to get in, so you must insure that the panel covering the tire fits perfectly to create a good seal against CO.

Sedan owners aren't immune, either. Poor trunk seals will allow CO entry, as will an improperly adjusted trunk latch. The trunk may close and stay closed, but if the latch isn't properly adjusted, the seal won't be CO-proof. Also, spare tire storage in sedans will usually have a drain hole. That hole should be plugged, or the tire-well cover made to fit exactly.

If your car has been smacked in the rear, check for crash damage that the repair guys didn't fix. Most cars have floor-pans that join the upper body at the trunk lip. If this area was ruptured in an accident, chances are the body shop didn't fix it because the damage wouldn't show. They'll straighten the bumper and trunk lip, and leave the floor pan pulled away, creating a large area for CO to enter. Crashes may also crush or bend tailpipes closed, and even tiny leaks in the forward part of the system will pass a large volume of exhaust gas because of the increased back-pressure. Check it out.

Do It Right. All the muffler shop owners we talked to had one complaint in common . . . people will try to patch their exhaust systems rather than have them fixed correctly. You wouldn't try to patch a cracked rubber fuel line would you? No, you'd replace it. Same argument goes for exhaust system repairs . . . if there's a hole or crack in the system, get it repaired, not patched. A patch only covers up problems. The problems continue to exist, and you may be lulled into a false sense of security because you "fixed" the leak.

Frozen orange juice cans, bailing wire, and "muffler bandages," do *not*, in our opinion, constitute an acceptable fix for exhaust leaks. If you do the work at the base hobby shop, muffler and pipe replacement is quick and relatively inexpensive. Remember, CO doesn't play favorites . . . it will assault whoever is in the car. Don't let your child be jeopardized because you were looking for an easy way out of exhaust problems.



Exhaust system mounting points should be checked for tightness. Loose mounts can cause the pipe to twist and chafe, which can create holes. Many squeaks and rattles can be found at these mounting points too, an added benefit of occasionally checking out your car's exhaust system.

(DRIVER wishes to thank George Scott of Scotty's Muffler Shop in San Bernardino, CA, for his assistance in the preparation of this article.)

. . . and it comes out here

florida teens

continued from page 19

help the hurtin' motorcyclist but it points out the need for plenty of cycle awareness on the part of motorists.

The drivers training course stresses the need for bikers to be prepared, both by using the defensive driving techniques already mentioned and by wearing proper protective clothing.

The Great Helmet Debate, i.e., whether to wear or not to wear, has raged since the first helmet law went into effect. Like most other states, Florida has a helmet law, and the students are advised of the different types of head protection available to them.

The main point here is: if you're going to shell (no pun intended) out $20 for an "el cheapo" skid lid, why not scratch up another fifty and get a stronger and more impact-resistant full-face job. The "el cheapo" will fulfill the letter of the law, but will not protect your head as well as the full-face should you go down (99 percent of all motorcyclists do, at least once). The full-face model has a bar to protect your chin and nose from nasty scars.

A couple of other points about protective clothing: consider wearing long pants, a jacket, gloves and boots. All are a definite aid in covering your skin should you prang your bike. Cutoffs, a tee-shirt and sandals will let you tan while riding—and give the doctors lots of experience at skin grafting.

The course also gives a few tips on motorcycle maintenance. Cables are one of the areas that motorcyclists neglect most frequently. Lube those cables often with a good oil or silicone lubricant; kits with special nozzles to force the lube into the cable are available at cycle shops for a few bucks. Be sure not to use chain lubricant because it hardens and can cause the cable to snap soon after use.

Chains can be another source of pain. Unless you keep the chain well lubricated and adjusted (a 15-minute job, check your manual) it will wear out much sooner than it should and take the sprocket with it. Figure about $50 to replace the two for a medium size bike. Improper or non-existent maintenance can cause the chain to heat up and seize or jump off the sprocket, locking the rear tire and possibly destroying your engine.

That's basically what the student course is all about and the military instructors let the students draw their own conclusions from the facts given. The students who have attended the course so far have found it worthwhile and have recommended that their school system continue its use. Part of it, we suspect, is a chance for them to get out of the classroom and watch the F-4s scoot down Homestead's runway.

But then, the instructors are glad to have a chance to show young people the base and offer some hints on driving safety. And the recruiters love them for it!

Proper ways to set up and use the standard jack that comes with most American automobiles are explained to (L to R) Renne Whitmore, Fred Zinsmeister and Cindy Bales, three of the students attending the course, by MSgt Mike Miller of the 31st Tactical Fighter Wing safety office. Be careful that you use the jack only on relatively level ground—it might slip off—and never crawl under a car supported by just a jack. They have been known to slip.

LETTERS TO BACKFIRE THE EDITOR

ENCOUNTERS WITH STEEL GRATING

While spending a few minutes in a government office waiting room, I had occasion to read a couple of articles from your well-written publication. Of particular interest was an item in the Jan '77 DRIVER on motorcycle safety.

As an avid cyclist with a large superbike, I thought it was a good write-up, but I was a little amused by the suggestion that one stop and, if possible, walk the machine across bridges and viaducts with floors of steel grating. The alternative was to ride across the rustiest part of the grating to at least improve traction.

I am not in the military, but cycle safety is part of the brotherhood regardless of occupation. So, here is a suggestion that will hopefully save someone a white-knuckle ride through his next encounter with steel grating. Likewise, it might eliminate a few traffic jams caused by bikers walking their bikes instead of riding them.

The problem is not as much one of adhesion as it is one of interaction between the tire tread and the grate pattern. When approaching a bridge with steel grating, try to be as far to the left of your lane as safely possible. As you roll onto the grating maintain a constant speed and drift the bike diagonally across to the right. The diagonal track tends to minimize the uncomfortable wobble induced when crossing straight across the grating. If the bridge is sufficiently long, several diagonal transitions may be necessary.

Good luck!

Mr. Peter Hartwick
Digital Equipment Corp.
Fairfax, VA 22030

Our Technical Editor had the unfortunate experience of going down on a bridge grating just outside of Bar Harbor, Maine, and once again about three miles from your Maynard, Mass., plant. He thoroughly agrees with the suggestion to walk a bike across that infernal stuff. He also admits, however, your suggestion makes infinitely more sense to the majority of riders.

MOTORCYCLE RIDING AND SAFETY

I wish to thank you for the articles in your Jan and Mar '77 issues on motorcycle riding and safety. I am presently the cycle safety rep for my squadron, and all too many times I see inexperienced and ill-prepared riders take off with only a portion of their brain in gear. Motorcycle riding is only as dangerous as the stupidity of the rider. It used to be true that most new riders had to learn by themselves through mistakes that sometimes were painful lessons, but with such articles as those and a little more beforehand education, maybe others won't have as many of those hurts that experienced riders learned the hard way.

A1C Stephen K. Milner, USAF
McGuire AFB, NJ 08641

VEHICLE TOWING A BOAT

A recent accident that I investigated occured when a vehicle towing a boat made a sudden stop. The trailer came loose from the ball and smashed the towing vehicle's gas tank. The ball was 1⅞" and the trailer's hitch had a two-inch receiver. The accident, which caused loss of personal property, could have been fatal. Here is a poem that I wrote on the subject:

To Tow . . .

Down the road you go
With your ski boat in tow.
The wrong size ball or hitch
May put your rig into a ditch.
Put safety first in each endeavor.
Don't trust in luck or the "other feller."
Check the rig yourself from bumper to prop
Lest it pass you when you stop
(Use your brains and safety chains.)
And don't forget my fearless friends,
The success of the trip depends . . .
On how it starts as well as ends.

SSgt Ken A. Jolley, USAF
Ground Safety Technician
Dyess AFB, TX 79606

DIGITAL SPEEDOMETERS

Congratulations on another great issue of DRIVER. The April '77 issue was truly informative and interesting.

Naturally, I can't hand out plaudits without some small pull of the chain. So, I must comment on the April "Double Clutch" column.

Digital speedometers are nothing new. Studebaker tried it for awhile and so did Mercedes. The idea sounds great but it is not functional and actually has unfavorable safety implications. For example, in order to read a digital speedometer your eyes must focus on the digits. This means the road in front of you is out of focus. This is true even if the digits are projected on the windshield.

A speedometer with a large pointer is easier and quicker to read since it is not necessary to actually read the digits. You can see the relative position of the pointer with peripheral vision without changing the focus of the eye. Well-designed aircraft instrument panels have followed this concept for some time. Of course for precise readings one must divert the eyes to read the meter. Other critical gauges also are easier and quicker to read if they are pointer equipped. Peripheral vision will pick up a temperature gauge pointer pegged on "HOT" quicker than three digits reading "250."

You would do better to advise your readers to avoid selecting gauges with digital readouts if they have a choice. Aside from succumbing to automobile industry gimmicks you folks do great work.

Lt Col John C. Machun, USAF
4900 ABW/SE
Kirtland AFB, NM 87117

Makes sense to us. Wonder if the industry has thought this through, because those digital readouts are coming soon.

SPEEDOMETER READINGS AND TOWING

I would like to comment on two items in your Feb '77 issue of DRIVER.

First, the small item on tires causing differences in speedometer readings. I recently purchased a '77 Plymouth Trailduster on which oversize tires had been installed at the factory. The invoice listed it as having 10:00x15 tires, but it actually came with 11:00x15 tires. When I got my second speeding ticket in Illinois (to the tune of $26 each), the Highway Patrolman who wrote the ticket clued me in. After that, I clocked my odometer over a 10-mile stretch on an Interstate and it was 12% off. This obviously will also affect gas mileage readings.

The second item was a paragraph in your article on towing with which I agree. I had an occasion to get my truck pulled out of the mud, and the tow cable twisted my stock bumper like a piece of sheet metal.

I went to the insurance company and they gave me $41 to buy a new bumper which cost about $120. I then decided to make a new bumper which would withstand some punishment.

I went to a local salvage yard and purchased a piece of 8-inch channel iron, about seven feet long, which cost me 10¢ a pound, or about $6. I took it to a local body shop and had the ends cut and rounded, and a pair of brackets welded on. A little body putty to fill in around the sharp edges, a can of silver spray paint, and I had my new bumper. Total cost, including materials and labor, $41.

I am enclosing a picture of my truck with the new bumper. You will notice it looks almost stock.

I would also like to take this opportunity to say I think you have a fine magazine, and I really enjoy reading it.

RM1 (SS) R. Malcom, USN
USS James Madison
SSBN 627 (Blue)
FPO New York 09501

A fine job and well done! A little ingenuity and know-how goes a long way.

MOPEDS

If I had known all the red tape existed regarding mopeds I wouldn't have gotten one. Michigan regards them as bicycles, but the Air Force up here can't seem to make up their minds how they're going to regard mopeds. Everytime I would go to the gate I would have to give an explanation to the guard, etc.

There is something here I don't understand. Why is everyone so concerned about moped riders wearing helmets, etc., etc., but it doesn't bother them that a person riding a 10-speed bicycle can easily go twice as fast as a moped, and reaching a speed of 60 mph on a 10-speed isn't that difficult? Why aren't bicycle riders required to wear goggles, helmets, and other safety items? Mopeds are quite harmless, and it would be appreciated if the Air Force and State Governments would back off and let people ride them in peace.

I'm *not* suggesting, by the way, that the Air Force start cracking down on bicycle riders. Kindly leave bicycle riders alone. Thank you.

You said in your article that helmets are required on all Air Force bases for mopeds. I haven't as of yet been required to wear one at Kincheloe, and at Keesler they weren't required.

Keith P. Albert, USAF
P.O. Box 10
Kinross, MI 49752

The Air Force is not going to consider the moped as a motorcycle and helmets aren't required. This is a change from the original position and some confusion may exist.

Address your letters to:
Editor
DRIVER Magazine
AFISC/SEDD
Norton AFB CA 92409

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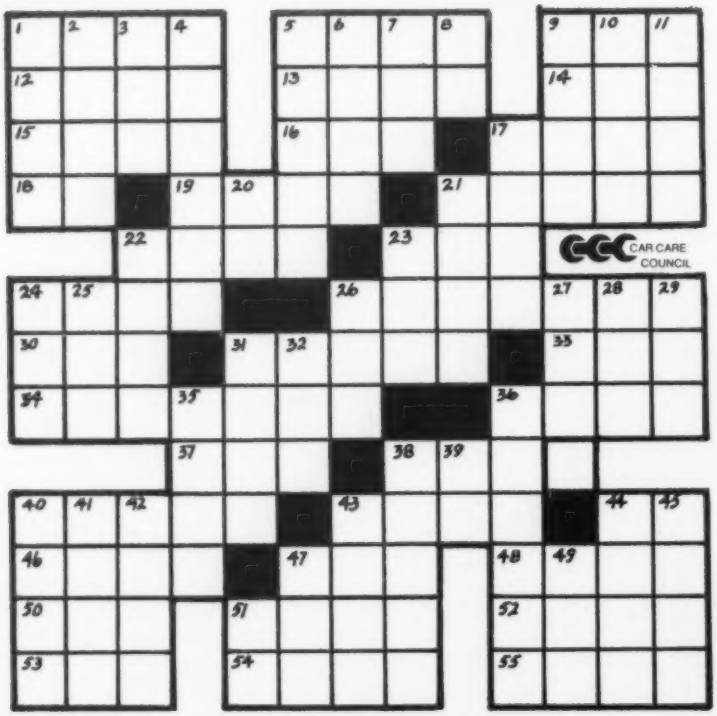
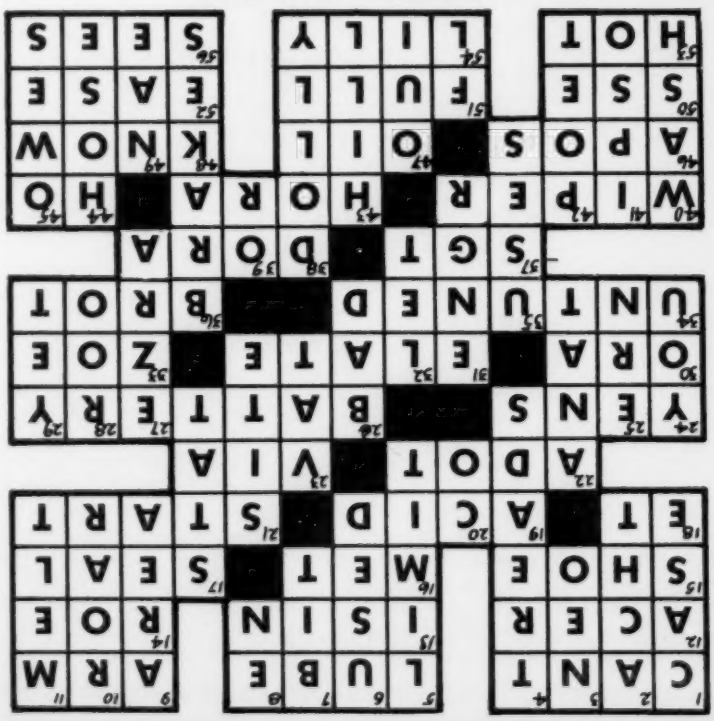


CAR CARE CROSSWORD

Across

1. With 21 across—what may happen if you neglect ignition system?
5. Vital chassis service
9. Idler _____, part of your steering system
12. One who scores a hole in one
13. Available to visitors (two words)
14. Preacher _____, former Dodger pitcher
15. Vital part of brake system
16. Tom Seaver, for one
17. Helps prevent oil leakage
18. And (Latin)
19. Corrosive to battery cables
22. Polk _____
23. By way of
24. Cravings
26. When run down, you also experience 1, 21
30. _____ et labora
31. To make happy
33. _____ Caldwell, actress
34. This kind of engine may cause 1, 21, also
36. Bread in Berlin
37. Non-corn (abrev)
38. Dumb _____
40. Vital to vision in rain
43. Israeli dance
44. Westward _____ !
46. Military addresses
47. Protector against engine wear
48. Comprehend
50. Direction
51. Make sure your radiator is clean and _____to avoid overheating
52. Comfort
53. With an improper thermostat your engine will get _____
54. French National Flower
55. Observes

Down

1. Part of battery that can crack open
2. German for the number of cylinders most cars have
3. New (Greek)
4. Their thicknesses indicate safety of your tires
5. Speed limit
6. If you take care of your car, you'll get more when selling it _____
7. A morsel
8. In (Spanish)
9. Region
10. Sound your muffler makes when it's defective
11. Succumb to heat
17. Office copy
20. Deadly substance in exhaust
21. Locale
22. Study of human structure (Abrev.)
23. Large container
24. Second person
25. Sea Eagle
26. This kind of shock absorber makes driving dangerous
27. _____ Taft Benson or Stone
28. Australian marsupial (Abrev.)
29. Still
31. Designer of cars (Abrev.)
32. Allow
35. Employs
36. You can't stop safely unless these are working
38. _____ Hamilton or Levy
39. Conjunction
40. This helps keep car bodies from deterioration
41. _____ Facto
42. Longfellow or Byron
43. _____ and Dale
44. Important part of cooling system
45. Is indebted to
47. French affirmative
49. Scottish negative
51. Liquid (Abrev.)

ANSWERS (NO FAIR PEEKING)